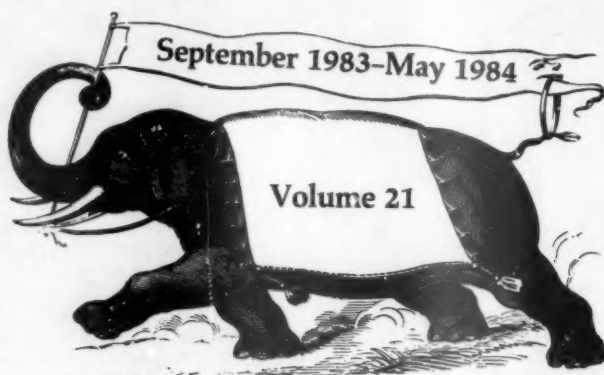


## ANNUAL INDEX



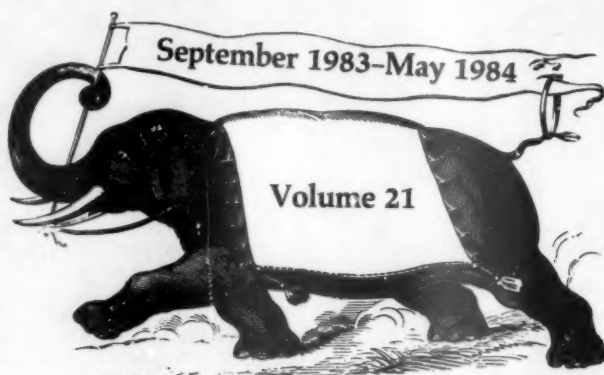
### AUTHOR INDEX

Alexander, Gretchen M. *Working Together*. Sept 83:26, 51  
Ault, Charles R., Jr. *Intelligently Wrong: Some Comments on Children's Misconceptions*. May 84:22-24  
Ballin, Amy. *Gardening at Horizons*. April 84:21-22  
Bandy, Marlin Robert. *See How They Grow*. Oct 83:42-43  
Barhydt, Frances. *Sweet Remoan*. Nov/Dec 83:17-19  
Barnes, George B. *Curve Balls, Airplane Wings, and Prairie Dog Holes*. May 84:13-15  
Barrow, Lloyd H., and Bette S. Bergeron. *Using the Big C in Science*. Oct 83:27-28  
\_\_\_\_\_, and Gert Nesin. *Density in Liquids*. April 84:28-30  
Batch, D. David. *Evening Skies* (monthly)  
Bellipanni, Lawrence J., Donald R. Cotten, and Jan Marion Kirkwood. *In the Balance*. Jan 84:12-13  
Bergeron, Bette S., and Lloyd H. Barrow. *Using the Big C in Science*. Oct 83:27-28  
Bindel, Henry J., Jr., and Phyllis Marcuccio, eds. *Directory of Science Education Suppliers, 3rd Edition*. Jan 84:27-98  
Birnie, Howard H., and Alan Ryan. *Inquiry/Discovery Revisited*. April 84: 31-32  
Blueford, Joyce R., and Leslie C. Gordon. *The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way*. April 84:12-15  
Brown, Mavis, and Jane Sawyer. *A Child's Garden of Radishes*. April 84:23-24  
Burns, Joseph C. *Combating the Hydra* (Curriculum Reviews). Sept 83:59  
Butzow, John W. *Bringing Clams to the Classroom*. Oct 83:33-35  
Carver, Deborah J. *Cell Theory Rap*. Nov/Dec 83:25  
Cassen, Julie. *Why the North Star Doesn't Move* (Helpful Hints). April 84:20  
Coble, Charles R., and Thomas R. Koballa, Jr. *The Rural Advantage*. Oct 83:19-22  
Coe, Elisabeth J., and Kathleen A. Lentz. *Determining Levels of Concreteness and Abstraction* (What Research Says). March 84:50-52  
Combs, Leslie. *An Echo in Nepal*. Sept 83:15-18  
Contant, Terry, and Carolyn Sumners. *Earthbound Astronauts*. Nov/Dec 83:7-11  
Cotten, Donald R., Lawrence J. Bellipanni, and Jan Marion Kirkwood. *In the Balance*. Jan 84:12-13  
Coulter, John C. *Sea Prints* (Helpful Hints). May 84:56  
Cowles, Kathleen Letcher. *350 Million Years Old and Still Going Strong*. March 84:20-23  
Cronin, Linda L., and Michael J. Padilla. *Endangered Species: Activities and Ideas* (Early Adolescence). Jan 84:109-11  
Crowe, Diane. *The Ins and Outs of Life Science* (In the Schools). Nov/Dec 83:34-36  
Dabney, Joy, Irwin L. Slesnick, and Christine Mullikin. *Who Lives in Mud?* (Poster). March 84:29-36  
Davis, Velma Lou. *Prickly Pear to the Rescue*. May 84:11-12  
Del Soldo, Lou, and Lisa Irwin. *Invitation to a Mold Symposium* (In the Schools). Jan 84:106-08  
Dennison, Judy H. *The Growing Classroom* (Curriculum Reviews). April 84:33

Dobrofsky, Miriam. *TOPS Learning Systems* (Curriculum Reviews). Oct 83:50-52  
Faller, Richard. *Solar Energy: Transferring and Storing Energy from the Sun* (Curriculum Reviews). Feb 84:37; *Visual Perception of Objects* (Curriculum Reviews). March 84:53  
Flowers, John D. *Evening Skies in a Shoe Box*. May 84:55  
Foster, Gail C. *"Oh No! A Science Project!"* Nov/Dec 83:20-22  
Garigliano, Leonard J. *Early Adolescence* (Letters). Sept 83:5  
Garver, Janice B. *Minerals and Formal Thought* (Early Adolescence). Sept 83:54-56  
George, Twig, Richard Tinney, and Linda Maraniss. *The First of March Gets the Seal of Approval*. Feb 84:10-13  
Gordon, Leslie C., and Joyce R. Blueford. *The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way*. April 84:12-15  
Gordon, Paul. *Help Wanted*. Oct 83:18; *The May-June Issue of S&C* (Letters). Sept 83:5  
Grigsby, Doris K., and Mary H. Lewis. *Tomatoes in Space*. March 84:6-7  
Gurley, Laine I. *Take a Bird's-eye View*. Sept 83:19-21  
Halper, Jean. *A Wife E. Scheme?* (Letters). Sept 83:5  
Heikkinen, Henry, ed. *Resources Reviews* (monthly)  
Howe, Samuel F. *Using Interactive Video*. Sept 83:13-14  
Irwin, Lisa, and Lou Del Soldo. *Invitation to a Mold Symposium* (In the Schools). Jan 84:106-08  
Johns, Kenneth W. *Stamp Out Blue Blood!* May 84:20-21  
Johnston, Jerome. *Meeting Science Education Goals with 3-2-1 CONTACT* (What Research Says). April 84:38-39  
Jones, Howard L., and Carolyn Sumners. *Roller Coaster Science*. Oct 83:12-14  
Jung, Joan. *An Aluminum Belt: Some Lessons in Recycling*. March 84:38-39  
Kanis, Ira B., et al. *Nature's Niche*. April 84:26-27  
Kaplan, Nancy. *But That's Not Fair!* April 84:24-25  
Karstaedt, Deborah A. *The World of Tiny Living Things*. Jan 84:7-11  
Kirkwood, Jan Marion, Lawrence J. Bellipanni, and Donald R. Cotten. *In the Balance*. Jan 84:12-13  
Knouff, Mary Jo, and Janet K. Wolfe. *Flying High for 200 Years*. Sept 83:9-12  
Koballa, Thomas R., Jr., and Charles R. Coble. *The Rural Advantage*. Oct 83:19-22  
Kortmeyer, Gloria. *Saturday Morning Science Live* (In the Schools). March 84:48-49  
Kramer, David C. *Sharing Trees from Cuttings*. Nov/Dec 83:23-24  
Kucherov, Alexander. *The Tree Machine*. Feb 84:28-29  
Lamb, William G. *Why Is the Sky Blue?* Jan 84:101-02  
Lawrence, Paula, Gerald Skoog, and Barbara Simmons. *At Their Level: LEA in the Science Classroom*. Jan 84:103-05  
Lentz, Kathleen A., and Elisabeth J. Coe. *Determining Levels of Concreteness and Abstraction* (What Research Says). March 84:50-52  
Lewis, Mary H., and Doris K. Grigsby. *Tomatoes in Space*. March 84:6-7  
Leyden, Michael B. *For It's Only a Paper Moon*. April 84:18-20  
Lind, Karen K. *Which Computer Magazine?* Jan 84:21-23  
Lupo, Patricia, O.S.B. *Do Not Squander What Belongs to Future*

*Generations* (In the Schools). May 84:63-64  
McClurg, Pat. *Don't Squash It! Collect It!*. May 84:8-10  
Macey, Joan Mary. *What a Trashy Display!* (Bulletin Board). Feb 84:38  
McIntyre, Margaret. *Feeling Fall* (Early Childhood). Oct 83:44-46; *'Tis the Season* (Early Childhood). Nov/Dec 83:37-38; *Welcome Back!* (Early Childhood). Sept 83:52-53  
McKee, Mary E. *Some Plants We Eat*. Feb 84:19-20  
McSwain, June. *Reconsidering Gypsy Maths* (Letters). Sept 83:5  
Main, Edna D. *Science and Creative Writing: A Dynamic Duo*. Jan 84:24-26, 99-100  
Maraniss, Linda, Richard Tinney, and Twig George. *The First of March Gets the Seal of Approval*. Feb 84:10-13  
Marcuccio, Phyllis, and Henry J. Bindel, Jr., eds. *Directory of Science Education Suppliers, 3rd Edition*. Jan 84:27-98  
Mechling, Kenneth R., and Donna L. Oliver. *The Principals' Project: Promoting Science Among Elementary School Principals*. Nov/Dec 83:14-16; *Who Is Killing Your Science Program?* Oct 83:15-18  
Medlock, Robert, and Josephine Midkiff. *A Field Trip to Lakota* (In the Schools). April 84:38-39  
Midkiff, Josephine, and Robert Medlock. *A Field Trip to Lakota* (In the Schools). April 84:38-39  
Miller, Penny Folley. *Pick a Pack of Prisoners*. Oct 83:36-37  
Mills, Richard. *Insects and Others*. May 84:4-7  
Milson, James L. *Looking Around at the Zoo*. Feb 84:24-27; see also *A Koala Update* (In the News). May 84:3  
Mindes, Mark, et al. *Nature's Niche*. April 84:26-27  
Minstrell, Jim, and Carol Smith. *Alternative Conceptions and a Strategy for Change* (What Research Says). Nov/Dec 83:31-33  
Mogil, H. Michael. *Sharpening Your Weather Eye*. Feb 84:14-18; *Winter Storm Watch*. March 84:10-14  
Moore, John Travers. *Some Bugs!* Sept 83:22-23  
Mullikin, Christine, Irwin L. Slesnick, and Joy Dabney. *Who Lives in Mud?* (Poster). March 84:29-36  
Nathanson, Bob, et al. *Nature's Niche*. April 84:26-27  
Neleson, Charles S. *The May-June Issue of S&C* (Letters). Sept 83:5  
Nesin, Gert, and Lloyd H. Barrow. *Density in Liquids*. April 84:28-30  
Oliver, Donna L., and Kenneth R. Mechling. *The Principals' Project: Promoting Science Among Elementary School Principals*. Nov/Dec 83:14-16; *Who Is Killing Your Science Program?* Oct 83:15-18  
Orlich, Donald C. *Inservice Education: A Problem or a Solution?* (What Research Says). Feb 84:33-35  
O'Sullivan, Kathleen A. *Creating a Learning Center*. March 84:15-17  
Padilla, Michael, and Linda L. Cronin. *Endangered Species: Activities and Ideas* (Early Adolescence). Jan 84:109-11  
Perry-Holmes, Claudia. *Outdoors with Uncle Sam: 46 Ways to Use the Government Printing Office*. Oct 83:23-26  
Phillips, Julie. *Space Age Mater*. Oct 83:9-11  
Pizzini, Edward L., and Rebecca C. Severeide. *The Role of Play in Science* (What Research Says). May 84:58-61

## ANNUAL INDEX



### AUTHOR INDEX

Alexander, Gretchen M. *Working Together*. Sept 83:26, 51  
Ault, Charles R., Jr. *Intelligently Wrong: Some Comments on Children's Misconceptions*. May 84:22-24  
Ballin, Amy. *Gardening at Horizons*. April 84:21-22  
Bandy, Marlin Robert. *See How They Grow*. Oct 83:42-43  
Barhydt, Frances. *Sweet Remoan*. Nov/Dec 83:17-19  
Barnes, George B. *Curve Balls, Airplane Wings, and Prairie Dog Holes*. May 84:13-15  
Barrow, Lloyd H., and Bette S. Bergeron. *Using the Big C in Science*. Oct 83:27-28  
\_\_\_\_\_, and Gert Nesin. *Density in Liquids*. April 84:28-30  
Batch, D. David. *Evening Skies* (monthly)  
Bellipanni, Lawrence J., Donald R. Cotten, and Jan Marion Kirkwood. *In the Balance*. Jan 84:12-13  
Bergeron, Bette S., and Lloyd H. Barrow. *Using the Big C in Science*. Oct 83:27-28  
Bindel, Henry J., Jr., and Phyllis Maruccio, eds. *Directory of Science Education Suppliers, 3rd Edition*. Jan 84:27-98  
Birnle, Howard H., and Alan Ryan. *Inquiry/Discovery Revisited*. April 84: 31-32  
Blueford, Joyce R., and Leslie C. Gordon. *The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way*. April 84:12-15  
Brown, Mavis, and Jane Sawyer. *A Child's Garden of Radishes*. April 84:23-24  
Burns, Joseph C. *Combating the Hydra* (Curriculum Reviews). Sept 83:59  
Butzow, John W. *Bringing Clams to the Classroom*. Oct 83:33-35  
Carver, Deborah J. *Cell Theory Rap*. Nov/Dec 83:25  
Cassen, Julie. *Why the North Star Doesn't Move* (Helpful Hints). April 84:20  
Coble, Charles R., and Thomas R. Koballa, Jr. *The Rural Advantage*. Oct 83:19-22  
Coe, Elisabeth J., and Kathleen A. Lentz. *Determining Levels of Concreteness and Abstraction* (What Research Says). March 84:50-52  
Combs, Leslie. *An Echo in Nepal*. Sept 83:15-18  
Contant, Terry, and Carolyn Sumners. *Earthbound Astronauts*. Nov/Dec 83:7-11  
Cotten, Donald R., Lawrence J. Bellipanni, and Jan Marion Kirkwood. *In the Balance*. Jan 84:12-13  
Coulter, John C. *Sea Prints* (Helpful Hints). May 84:56  
Cowles, Kathleen Letcher. *350 Million Years Old and Still Going Strong*. March 84:20-23  
Cronin, Linda L., and Michael J. Padilla. *Endangered Species: Activities and Ideas* (Early Adolescence). Jan 84:109-11  
Crowe, Diane. *The Ins and Outs of Life Science* (In the Schools). Nov/Dec 83:34-36  
Dabney, Joy, Irwin L. Slesnick, and Christine Mullikin. *Who Lives in Mud?* (Poster). March 84:29-36  
Davis, Velma Lou. *Prickly Pear to the Rescue*. May 84:11-12  
Del Soldo, Lou, and Lisa Irwin. *Invitation to a Mold Symposium* (In the Schools). Jan 84:106-08  
Dennison, Judy H. *The Growing Classroom* (Curriculum Reviews). April 84:33

Dobrofsky, Miriam. *TOPS Learning Systems* (Curriculum Reviews). Oct 83:50-52  
Faller, Richard. *Solar Energy: Transferring and Storing Energy from the Sun* (Curriculum Reviews). Feb 84:37; *Visual Perception of Objects* (Curriculum Reviews). March 84:53  
Flowers, John D. *Evening Skies in a Shoe Box*. May 84:55  
Foster, Gail C. *"Oh No! A Science Project!"* Nov/Dec 83:20-22  
Garigliano, Leonard J. *Early Adolescence* (Letters). Sept 83:5  
Garver, Janice B. *Minerals and Formal Thought* (Early Adolescence). Sept 83:54-56  
George, Twig, Richard Tinney, and Linda Maraniss. *The First of March Gets the Seal of Approval*. Feb 84:10-13  
Gordon, Leslie C., and Joyce R. Blueford. *The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way*. April 84:12-15  
Gordon, Paul. *Help Wanted*. Oct 83:18; *The May-June Issue of S&C* (Letters). Sept 83:5  
Grigsby, Doris K., and Mary H. Lewis. *Tomatoes in Space*. March 84:6-7  
Gurley, Laine I. *Take a Bird's-eye View*. Sept 83:19-21  
Halper, Jean. *A Wife E. Scheme?* (Letters). Sept 83:5  
Heikkinen, Henry, ed. *Resources Reviews* (monthly)  
Howe, Samuel F. *Using Interactive Video*. Sept 83:13-14  
Irwin, Lisa, and Lou Del Soldo. *Invitation to a Mold Symposium* (In the Schools). Jan 84:106-08  
Johns, Kenneth W. *Stamp Out Blue Blood!* May 84:20-21  
Johnston, Jerome. *Meeting Science Education Goals with 3-2-1 CONTACT* (What Research Says). April 84:38-39  
Jones, Howard L., and Carolyn Sumners. *Roller Coaster Science*. Oct 83:12-14  
Jung, Joan. *An Aluminum Belt: Some Lessons in Recycling*. March 84:38-39  
Kanis, Ira B., et al. *Nature's Niche*. April 84:26-27  
Kaplan, Nancy. *But That's Not Fair!* April 84:24-25  
Karstaedt, Deborah A. *The World of Tiny Living Things*. Jan 84:7-11  
Kirkwood, Jan Marion, Lawrence J. Bellipanni, and Donald R. Cotten. *In the Balance*. Jan 84:12-13  
Knouff, Mary Jo, and Janet K. Wolfe. *Flying High for 200 Years*. Sept 83:9-12  
Koballa, Thomas R., Jr., and Charles R. Coble. *The Rural Advantage*. Oct 83:19-22  
Kortmeyer, Gloria. *Saturday Morning Science Live* (In the Schools). March 84:48-49  
Kramer, David C. *Sharing Trees from Cuttings*. Nov/Dec 83:23-24  
Kucherov, Alexander. *The Tree Machine*. Feb 84:28-29  
Lamb, William G. *Why Is the Sky Blue?* Jan 84:101-02  
Lawrence, Paula, Gerald Skoog, and Barbara Simmons. *At Their Level: LEA in the Science Classroom*. Jan 84:103-05  
Lentz, Kathleen A., and Elisabeth J. Coe. *Determining Levels of Concreteness and Abstraction* (What Research Says). March 84:50-52  
Lewis, Mary H., and Doris K. Grigsby. *Tomatoes in Space*. March 84:6-7  
Leyden, Michael B. *For It's Only a Paper Moon*. April 84:18-20  
Lind, Karen K. *Which Computer Magazine?* Jan 84:21-23  
Lupo, Patricia, O.S.B. *Do Not Squander What Belongs to Future*

*Generations* (In the Schools). May 84:63-64  
McClurg, Pat. *Don't Squash It! Collect It!*. May 84:8-10  
Macey, Joan Mary. *What a Trashy Display!* (Bulletin Board). Feb 84:38  
McIntyre, Margaret. *Feeling Fall* (Early Childhood). Oct 83:44-46; *'Tis the Season* (Early Childhood). Nov/Dec 83:37-38; *Welcome Back!* (Early Childhood). Sept 83:52-53  
McKee, Mary E. *Some Plants We Eat*. Feb 84:19-20  
McSwain, June. *Reconsidering Gypsy Maths* (Letters). Sept 83:5  
Main, Edna D. *Science and Creative Writing: A Dynamic Duo*. Jan 84:24-26, 99-100  
Maraniss, Linda, Richard Tinney, and Twig George. *The First of March Gets the Seal of Approval*. Feb 84:10-13  
Maruccio, Phyllis, and Henry J. Bindel, Jr., eds. *Directory of Science Education Suppliers, 3rd Edition*. Jan 84:27-98  
Mechling, Kenneth R., and Donna L. Oliver. *The Principals' Project: Promoting Science Among Elementary School Principals*. Nov/Dec 83:14-16; *Who Is Killing Your Science Program?* Oct 83:15-18  
Medlock, Robert, and Josephine Midkiff. *A Field Trip to Lakota* (In the Schools). April 84:38-39  
Midkiff, Josephine, and Robert Medlock. *A Field Trip to Lakota* (In the Schools). April 84:38-39  
Miller, Penny Folley. *Pick a Pack of Prisoners*. Oct 83:36-37  
Mills, Richard. *Insects and Others*. May 84:4-7  
Milson, James L. *Looking Around at the Zoo*. Feb 84:24-27; see also *A Kool Update* (In the News). May 84:3  
Minds, Mark, et al. *Nature's Niche*. April 84:26-27  
Minstrell, Jim, and Carol Smith. *Alternative Conceptions and a Strategy for Change* (What Research Says). Nov/Dec 83:31-33  
Mogil, H. Michael. *Sharpening Your Weather Eye*. Feb 84:14-18; *Winter Storm Watch*. March 84:10-14  
Moore, John Travers. *Some Bugs!* Sept 83:22-23  
Mullikin, Christine, Irwin L. Slesnick, and Joy Dabney. *Who Lives in Mud?* (Poster). March 84:29-36  
Nathanson, Bob, et al. *Nature's Niche*. April 84:26-27  
Neleson, Charles S. *The May-June Issue of S&C* (Letters). Sept 83:5  
Nesin, Gert, and Lloyd H. Barrow. *Density in Liquids*. April 84:28-30  
Oliver, Donna L., and Kenneth R. Mechling. *The Principals' Project: Promoting Science Among Elementary School Principals*. Nov/Dec 83:14-16; *Who Is Killing Your Science Program?* Oct 83:15-18  
Orlich, Donald C. *Inservice Education: A Problem or a Solution?* (What Research Says). Feb 84:33-35  
O'Sullivan, Kathleen A. *Creating a Learning Center*. March 84:15-17  
Padilla, Michael, and Linda L. Cronin. *Endangered Species: Activities and Ideas* (Early Adolescence). Jan 84:109-11  
Perry-Holmes, Claudia. *Outdoors with Uncle Sam: 46 Ways to Use the Government Printing Office*. Oct 83:23-26  
Phillips, Julie. *Space Age Meter*. Oct 83:9-11  
Pizzini, Edward L., and Rebecca C. Severeide. *The Role of Play in Science* (What Research Says). May 84:58-61

Plants, Robert W. *Projectile Point Classification*. Feb 84:6-9  
 Pon, Jenny, and Robert C. Victor. *Sky Calendar* (monthly)  
 Powell, Richard R. *Going to Seed*. Feb 84:21-23  
 Rappaport, Stephen, et al. *Nature's Niche*. April 84:26-27  
 Reesink, Carole J. *Metric Munchies*. April 84:16-17  
 Ricker, Kenneth S. *Science* (Curriculum Reviews). Feb 84:36-37  
 Ridgway, Carolyn. *Measuring Up*. Oct 83:29-30  
 Riley, Joseph P. *Come With Me Science Series* (Curriculum Reviews). Oct 83:52  
 Rutland, Carole. *Cosmitudes* (Learning Aids of Note). April 84:33  
 Ryan, Alan, and Howard H. Birnie. *Inquiry/Discovery Revisited*. April 84:31-32  
 Santoró, Anne Marie. 3-2-1 CONTACT. Sept 83:24-26  
 Sawyer, Jane, and Mavis Brown. *A Child's Garden of Radishes*. April 84:23-24  
 Schneider, Mike. *Setting Up an Outdoor Lab*. Jan 84:17-20  
 Sennett, Mary Lucy. *Dealing with Patterns*. May 84:53-54  
 Severeide, Rebecca C., and Edward L. Pizzini. *The Role of Play in Science* (What Research Says). May 84:58-61  
 Sewall, Susan. *Students as Spiders*. March 84:18-19  
 Shaw, Edward. *Elementary Population Activities Kit* (Curriculum Reviews). Sept 83:59-60; see also *A Misnomer*. Feb 84:37; *Pandas and Arthropods! An Introduction to Insects and Their Relatives* (Curriculum Reviews). Nov/Dec 83:39  
 Sheldon, Daniel S., and Robert E. Yager. *Nutrition Made R.E.A.L.* Feb 84:30-31  
 Shrigley, Robert L. *If I Were Beginning Again: Reflections of a 30-Year Veteran*. April 84:6-11  
 Simmons, Barbara, Paula Lawrence, and Gerald Skoog. *At Their Level: LEA in the Science Classroom*. Jan 84:103-05  
 Skoog, Gerald, Paula Lawrence, and Barbara Simmons. *At Their Level: LEA in the Science Classroom*. Jan 84:103-05  
 Slesnick, Irwin L., Christine Mullikin, and Joy Dabney. *Who Lives in Mud?* (Poster). March 84:29-36  
 Sloman, Eneas. *Have You Hugged Your Tree Today?* Oct 83:31-32  
 Smith, Carl. *Building a Nature Trail*. Jan 84:14-17  
 Smith, Carol, and Jim Minstrell. *Alternative Conceptions and a Strategy for Change* (What Research Says). Nov/Dec 83:31-33  
 Smith, Walter S. *Boning Up on Birds*. Nov/Dec 83:26-27  
 Styer, Sandra. *Books That Ask the Right Questions*. March 84:40-42  
 Summers, Carolyn, and Terry Contant. *Earthbound Astronauts*. Nov/Dec 83:7-11  
 ———, and Howard L. Jones. *Roller Coaster Science*. Oct 83:12-14  
 Sutherland, Betsy. *Making Insect Models*. March 84:24-28, 37  
 Tinney, Richard, Twig George, and Linda Maraniss. *The First of March Gets the Seal of Approval*. Feb 84:10-13  
 Victor, Robert C. *The Return of the Sun Dragon*. May 84:16-19  
 ———, and Jenny Pon. *Sky Calendar* (monthly)  
 Walker, Ormiston H. *Making Waves with Doppler*. March 84:8-9  
 Wandersee, James H. *The Concept of "Away" (What Research Says)*. Oct 83:47-49  
 Waugh, Michael L. *The Science of Steelmaking* (Curriculum Reviews). May 84:62  
 White, Cathie Baird. *Practical Technology* (Early Adolescence). Oct 83:38-41  
 White, Edwin P. *The Factory* (Curriculum Reviews). May 84:62; *Geology Search* (Curriculum Reviews). Feb 84:38; *Mopout Parade* (Curriculum Reviews). Feb 84:37; *Parts of a Microscope* (Curriculum Reviews). May 84:62  
 Wolfe, Janet K., and Mary Jo Knouff. *Flying High for 200 Years*. Sept 83:9-12  
 Yager, Robert E., and Daniel S. Sheldon. *Nutrition Made R.E.A.L.* Feb 84:30-31  
 Zimmerman, Marianna. *One from the Heart*. Nov/Dec 83:28-29

## SUBJECT INDEX

### Activities and Resources

Ad-onibles (monthly)

An Aluminum Belt: Some Lessons in Recycling. Joan Jung. March 84:38-39

Boning Up on Birds. Walter S. Smith. Nov/Dec 83:26-27  
 Books That Ask the Right Questions. Sandra Styer. March 84:40-42  
 Bringing Clams to the Classroom. John W. Butzow. Oct 83:33-35  
 Building a Nature Trail. Carl Smith. Jan 84:14-17  
 A Child's Garden of Radishes. Mavis Brown and Jane Sawyer. April 84:23-24  
 The Concept of "Away" (What Research Says). James H. Wandersee. Oct 83:47-49  
 Curve Balls, Airplane Wings, and Prairie Dog Holes. George B. Barnes. May 84:13-15  
 Dealing with Patterns. Mary Lucy Sennett. May 84:53-54  
 Density in Liquids. Gert Nesin and Lloyd H. Barrow. April 84:28-30  
 Directory of Science Education Suppliers, 3rd Edition. Ed. Henry J. Bindel, Jr. and Phyllis Marcuccio. Jan 84:27-98  
 Don't Squash It! Collect It! Pat McClurg. May 84:8-10  
 Earthbound Astronauts. Carolyn Summers and Terry Contant. Nov/Dec 83:7-11  
 Endangered Species: Activities and Ideas (Early Adolescence). Michael J. Padilla and Linda L. Cronin. Jan 84:109-11  
 Evening Skies in a Shoe Box. John D. Flowers. May 84:55  
 The First Hundred Years of Ballooning (Poster). Sept 83:27-28, 49-50  
 The First of March Gets the Seal of Approval. Richard Tinney, Twig George, and Linda Maraniss. Feb 84:10-13  
 Flying High for 200 Years. Janet K. Wolfe and Mary Jo Knouff. Sept 83:9-12  
 Go Fly a Balloon! Nov/Dec 83:12-13  
 Going to Seed. Richard R. Powell. Feb 84:21-23  
 Have You Hugged Your Tree Today? Eneas Sloman. Oct 83:31-32  
 Help Wanted. Paul Gordon. Oct 83:18  
 Insects and Others. Richard Mills. May 84:4-7  
 In the News (monthly)  
 Looking Around at the Zoo. James L. Milson. Feb 84:24-27; see also *A Kaala Update* (In the News). May 84:3  
 Making Insect Models. Betsy Sutherland. March 84:24-28, 37  
 Measuring Up. Carolyn Ridgway. Oct 83:29-30  
 Metric Munchies. Carole J. Reesink. April 84:16-17  
 The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way. Joyce R. Blueford and Leslie C. Gordon. April 84:12-15  
 Nutrition Made R.E.A.L. Robert E. Yager and Daniel S. Sheldon. Feb 84:30-31  
 One from the Heart. Marianna Zimmerman. Nov/Dec 83:28-29  
 Outdoors with Uncle Sam: 46 Ways to Use the Government Printing Office. Claudia Perry-Holmes. Oct 83:23-26  
 Outstanding Science Trade Books for Children. 1983. March 84:43-47  
 Pick a Pack of Prizewinners. Penny Folley Miller. Oct 83:36-37  
 Practical Technology (Early Adolescence). Cathie Baird White. Oct 83:38-41  
 Prickly Pear to the Rescue. Velma Lou Davis. May 84:11-12  
 Projectile Point Classification. Robert W. Plants. Feb 84:6-9  
 Resources Review. Ed. Henry Heikinen (monthly)  
 Roller Coaster Science. Carolyn Summers and Howard L. Jones. Oct 83:12-14  
 The Rural Advantage. Charles R. Coble and Thomas R. Koballa, Jr. Oct 83:19-22  
 Science and Creative Writing: A Dynamic Duo. Edna D. Main. Jan 84:24-26, 99-100  
 See How They Grow. Marlin Robert Bandy. Oct 83:42-43  
 Setting Up an Outdoor Lab. Mike Schneider. Jan 84:17-20  
 Sharpening Your Weather Eye. H. Michael Mogil. Feb 84:14-18  
 Some Bugs! John Travers Moore. Sept 83:22-23  
 Some Plants We Eat. Mary E. McKee. Feb 84:19-20  
 Starting Trees from Cuttings. David C. Kramer. Nov/Dec 83:23-24  
 Students as Spiders. Susan Sewall. March 84:18-19  
 Sun Prints (Helpful Hints). John C. Coulter. May 84:56  
 Sweet Reason. Frances Barhydt. Nov/Dec 83:17-19  
 Take a Bird's-eye View. Laine I. Gurley. Sept 83:19-21  
 350 Million Years Old and Still Going Strong. Kathleen Letcher Cowles. March 84:20-23  
 Tomatoes in Space. Doris K. Grigsby and Mary H. Lewis. March 84:6-7  
 Using Interactive Video. Samuel F. Howe. Sept 83:13-14  
 Using the Big C in Science. Bette S. Bergeron and Lloyd H. Barrow. Oct 83:27-28  
 What a Trashy Display! (Bulletin Board). Joan Mary Macey. Feb 84:38  
 Which Computer Magazine? Karen K. Lind. Jan 84:21-23

Why Is the Sky Blue? William G. Lamb. Jan 84:101-02  
 Why the North Star Doesn't Move (Helpful Hints). Julie Cassen. April 84:20

Winter Storm Watch. H. Michael Mogil. March 84:10-14  
 Working Together. Gretchen M. Alexander. Sept 83:26, 51  
 The World of Tiny Living Things. Debrah A. Karstaedt. Jan 84:7-11

## Biology (Environmental and Natural Sciences)

An Aluminum Belt: Some Lessons in Recycling. Joan Jung. March 84:38-39  
 Boning Up on Birds. Walter S. Smith. Nov/Dec 83:26-27  
 Bringing Clams to the Classroom. John W. Butzow. Oct 83:33-35  
 Building a Nature Trail. Carl Smith. Jan 84:14-17  
 Cell Theory Rap. Deborah J. Carver. Nov/Dec 83:25  
 Do Not Squander What Belongs to Future Generations (In the Schools). Patricia Lupo, O.S.B. May 84:63-64  
 Don't Squash It! Collect It! Pat McClurg. May 84:8-10  
 Endangered Species: Activities and Ideas (Early Adolescence). Michael J. Padilla and Linda L. Cronin. Jan 84:109-11  
 The First of March Gets the Seal of Approval. Richard Tinney, Twig George, and Linda Maraniss. Feb 84:10-13  
 Gardening at Horizons. Amy Ballin. April 84:21-22  
 Going to Seed. Richard R. Powell. Feb 84:21-23  
 The Ins and Outs of Life Science (In the Schools). Diane Crowe. Nov/Dec 83:34-36  
 Insects and Others. Richard Mills. May 84:4-7  
 Invitation to a Mold Symposium (In the Schools). Lou Del Soldo and Lisa Irwin. Jan 84:106-08  
 Looking Around at the Zoo. James L. Milson. Feb 84:24-27; see also *A Kaala Update* (In the News). May 84:3  
 Making Insect Models. Betsy Sutherland. March 84:24-28, 37  
 Nutrition Made R.E.A.L. Robert E. Yager and Daniel S. Sheldon. Feb 84:30-31  
 Prickly Pear to the Rescue. Velma Lou Davis. May 84:11-12  
 The Rural Advantage. Charles R. Coble and Thomas R. Koballa, Jr. Oct 83:19-22  
 See How They Grow. Marlin Robert Bandy. Oct 83:42-43  
 Setting Up an Outdoor Lab. Mike Schneider. Jan 84:17-20  
 Some Plants We Eat. Mary E. McKee. Feb 84:19-20  
 Starting Trees from Cuttings. David C. Kramer. Nov/Dec 83:23-24  
 Students as Spiders. Susan Sewall. March 84:18-19  
 Take a Bird's-eye View. Laine I. Gurley. Sept 83:19-21  
 350 Million Years Old and Still Going Strong. Kathleen Letcher Cowles. March 84:20-23  
 The Tree Machine. Alexander Kucherov. Feb 84:28-29  
 Tomatoes in Space. Doris K. Grigsby and Mary H. Lewis. March 84:6-7  
 What a Trashy Display! (Bulletin Board). Joan Mary Macey. Feb 84:38  
 Who Lives in Mud? (Poster). Irwin L. Slesnick, Christine Mullikin, and Joy Dabney. March 84:29-36  
 The World of Tiny Living Things. Debrah A. Karstaedt. Jan 84:7-11

## Early Childhood

But That's Not Fair! Nancy Kaplan. April 84:24-25  
 A Child's Garden of Radishes. Mavis Brown and Jane Sawyer. April 84:23-24  
 Fedling Fall (Early Childhood). Margaret McIntyre. Oct 83:44-46  
 Have You Hugged Your Tree Today? Eneas Sloman. Oct 83:31-32  
 'Tis the Season (Early Childhood). Margaret McIntyre. Nov/Dec 83:37-38  
 Welcome Back! (Early Childhood). Margaret McIntyre. Sept 83:52-53

## Earth and Space Science

Evening Skies. D. David Batch (monthly)  
 Evening Skies in a Shoe Box. John D. Flowers. May 84:55  
 The First Hundred Years of Ballooning (Poster). Sept 83:27-28, 49-50  
 Flying High for 200 Years. Janet K. Wolfe and Mary Jo Knouff. Sept 83:9-12  
 For It's Only a Paper Moon. Michael B. Leyden. April 84:18-20  
 Go Fly a Balloon! Nov/Dec 83:12-13  
 Minerals and Formal Thought (Early Adolescence). Janice B. Carver. Sept 83:54-56



*The Not-So-Rocky Road to Earth Science: Some Geologists Show the Way.* Joyce R. Blueford and Leslie C. Gordon. April 84:12-15  
*The Return of the Sun Dragon.* Robert C. Victor. May 84:16-19  
*Sharpening Your Weather Eye.* H. Michael Mogil. Feb 84:14-18  
*Sky Calendar.* Robert C. Victor and Jenny Pon (monthly)  
*Tomatoes in Space.* Doris K. Grigsby and Mary H. Lewis. March 84:6-7  
*Why Is the Sky Blue?* William G. Lamb. Jan 84:101-02  
*Why the North Star Doesn't Move (Helpful Hints).* Julie Cassen. April 84:20  
*Winter Storm Watch.* H. Michael Mogil. March 84:10-14

#### Measurement and the Metric System

*Measuring Up.* Carolyn Ridgway. Oct 83:29-30  
*Metric Munchies.* Carole J. Reesink. April 84:16-17  
*Space Age Meter.* Julie Phillips. Oct 83:9-11

#### NSTA and CESI Activities

*Association Affairs* (monthly)  
*Guidelines for Authors.* Sept 83:71; May 84:70  
*NSTA Awards Program.* Oct 83:56-57  
*NSTA Calendar* (monthly)  
*NSTA Fall Meetings.* Sept 83:57-58  
*NSTA Member Benefits/Publications.* May 84:25-52  
*NSTA National Convention, Tours and Forms.* Nov/Dec 83:43-45; Jan 84:116-19; Feb 84:40-41  
*NSTA Position Statement: Recommended Standards for the Preparation and Certification of Teachers of Science at the Elementary and Middle/Junior High School Levels.* Sept 83:65-70  
*The Principals' Project: Promoting Science Among Elementary School Principals.* Kenneth R. Mechling and Donna L. Oliver. Nov/Dec 83:14-16

#### Physics and Chemistry

*Curve Balls, Airplane Wings, and Prairie Dog Holes.* George B. Barnes. May 84:13-15  
*Density in Liquids.* Gert Nesin and Lloyd H. Barrow. April 84:28-30  
*Earthbound Astronauts.* Carolyn Sumners and Terry Contant. Nov/Dec 83:7-11  
*Making Waves with Doppler.* Ormiston H. Walker. March 84:8-9  
*Roller Coaster Science.* Carolyn Sumners and Howard L. Jones. Oct 83:12-14  
*Sun Prints (Helpful Hints).* John C. Coulter. May 84:56  
*Sweet Reason.* Frances Barhydt. Nov/Dec 83:17-19

#### Programs and Curriculum Designs

*Combating the Hydra* (Curriculum Reviews). Joseph C. Burns. Sept 83:59  
*Come With Me Science Series* (Curriculum Reviews). Joseph P. Riley. Oct 83:52  
*Cosmictudes* (Learning Aids of Note). Carole Rutland. April 84:33  
*Elementary Population Activities Kit* (Curriculum Reviews). Edward Shaw. Sept 83:59-60; see also *A Minnow*. Feb 84:37  
*The Factory* (Curriculum Reviews). Edwin P. White. May 84:62  
*Geology Search* (Curriculum Reviews). Edwin P. White. Feb 84:38  
*The Growing Classroom* (Curriculum Reviews). Judy H. Dennison. April 84:33  
*Mopdown Parade* (Curriculum Reviews). Edwin P. White. Feb 84:37  
*Pandas and Arthropods! An Introduction to Insects and Their Relatives* (Curriculum Reviews). Eddie (Edward) Shaw. Nov/Dec 83:39  
*Parts of a Microscope* (Curriculum Reviews). Edwin P. White. May 84:62  
*Science* (Curriculum Reviews). Kenneth S. Ricker. Feb 84:36-37  
*The Science of Steelmaking* (Curriculum Reviews). Michael L. Waugh. May 84:62  
*Solar Energy: Transferring and Storing Energy from the Sun* (Curriculum Reviews). Richard Faller. Feb 84:37  
*TOPS Learning Systems* (Curriculum Reviews). Miriam Dobrofsky. Oct 83:50-52  
*Visual Perception of Objects* (Curriculum Reviews). Richard Faller. March 84:53

#### Science Education (Methods, Background, and Discussion)

*Alternative Conceptions and a Strategy for Change* (What Research Says). Jim Mui rell and Carol Smith. Nov/Dec 83:31-33  
*At Their Level: LEA in the Science Classroom.* Paula Lawrence, Gerald Skoog, and Barbara Simmons. Jan 84:103-05  
*Books That Ask the Right Questions.* Sandra Styer. March 84:40-42  
*But That's Not Fair!* Nancy Kaplan. April 84:24-25  
*The Concept of "Away" (What Research Says).* James H. Wandersee. Oct 83:47-49  
*Creating a Learning Center.* Kathleen A. O'Sullivan. March 84:15-17  
*Dealing with Patterns.* Mary Lucy Sennett. May 84:53-54  
*Determining Levels of Concreteness and Abstraction* (What Research Says). Kathleen A. Lentz and Elisabeth J. Coe. March 84:50-52  
*An Echo in Nepal.* Leslie Combs. Sept 83:15-18  
*A Field Trip to Lakota (In the Schools).* Josephine Midkiff and Robert Medlock. April 84:38-39  
*If I Were Beginning Again: Reflections of a 30-Year Veteran.* Robert L. Shrigley. April 84:6-11  
*Inquiry/Discovery Revisited.* Howard H. Birnie and Alan Ryan. April 84:31-32  
*Inservice Education: A Problem or a Solution? (What Research Says).* Donald C. Orlich. Feb 84:33-35  
*Intelligently Wrong: Some Comments on Children's Misconceptions.* Charles R. Ault, Jr. May 84:22-24  
*In the Balance.* Lawrence J. Bellipanni, Donald R. Cotten, and Jan Marion Kirkwood. Jan 84:12-13  
*Meeting Science Education Goals with 3-2-1 CONTACT* (What Research Says). Jerome Johnston. April 84:38-39  
*Minerals and Formal Thought (Early Adolescence).* Janice B. Garver. Sept 83:54-56  
*Nature's Niche.* Stephen Rappaport et al. April 84:26-27  
*"Oh No! A Science Project!"* Gail C. Foster. Nov/Dec 83:20-22  
*The Principals' Project: Promoting Science Among Elementary School Principals.* Kenneth R. Mechling and Donna L. Oliver. Nov/Dec 83:14-16  
*The Role of Play in Science* (What Research Says). Rebecca C. Severeide and Edward L. Pizzini. May 84:58-61  
*Saturday Morning Science Live (In the Schools).* Gloria Kortmeyer. March 84:48-49  
*Science and Creative Writing: A Dynamic Duo.* Edna D. Main. Jan 84:24-26, 99-100  
*Stamp Out Blue Blood!* Kenneth W. Johns. May 84:20-21  
*Sweet Reason.* Frances Barhydt. Nov/Dec 83:17-19  
*3-2-1 CONTACT.* Anne Marie Santoro. Sept 83:24-26  
*Using the Big C in Science.* Bette S. Bergeron and Lloyd H. Barrow. Oct 83:27-28  
*Who Is Killing Your Science Program?* Kenneth R. Mechling and Donna L. Oliver. Oct 83:15-18

## NSTA Calendar

**July 25-28, 1984**—NSTA Summer Board/CAG Meeting, Breckenridge, Colorado

**October 15, 1984**—Deadline for submissions for American Vacuum Society Award (write NSTA for forms)

**October 18-20, 1984**—NSTA Area Convention, Minneapolis, Minnesota

**November 1, 1984**—Deadline for receipt of nomination materials for NSTA Board of Directors

**November 8-10, 1984**—NSTA Area Convention, Charlotte, North Carolina

**November 14, 1984**—Deadline for the NSTA Awards Programs (write NSTA for forms):

- The Robert H. Carleton Award for National Leadership in the Field of Science
- The NSTA Citations for Distinguished Service to Science Education
- The Gustav Ohaus Awards, sponsored by the Ohaus Scale Corporation
- The Science Teaching Achievement Recognition (STAR) Awards, sponsored by the American Gas Association
- The Exemplary Middle/Junior High Science Teaching Award, sponsored by the CIBA-GEIGY Corporation
- The Exemplary Secondary Science Teaching Award, sponsored by the CIBA-GEIGY Corporation
- The Sheldon Award for Exemplary Science Equipment and Facilities, sponsored by the Sheldon Manufacturing Company
- The Outstanding Science Teacher of the Year Award, sponsored by *Discover* Magazine
- The Cambridge Development Laboratory Award for The Art of Teaching with Computers

**November 29-December 1, 1984**—NSTA Area Convention, Albuquerque, New Mexico

## Advertisers

71  
Entomological Society of America

73  
Marsh Farms

71  
MMI Space Science

2, 25-52, 54  
NSTA Publications

Cover IV  
Ohaus Scale

Cover III  
Random House

73  
Shenandoah College

Cover II  
Silver Burdett

See  
You  
Next  
Fall

